

# Memories, Dreams, and Time

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Nov 6, 2021



We all have our time machines, don't we. Those that take us back are memories...And those that carry us forward, are dreams.

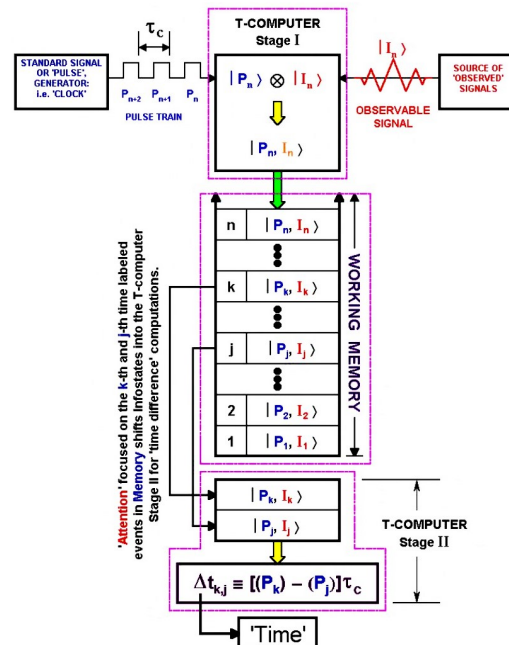
— *Jeremy Irons* —

**Abstract:** Time in Dreams [dream states vs. day dreams] and Memories presents a puzzle to our conscious brain when we are centered in the 'now' of our awakened states. Our brains T-computer labels memories with a 'time stamp' that allows us to organize sequential patterns defining where these are located in the past of our brains map of history. The time labels of the memories can be compared to determine which memory happened first and whether or not there is a cause and effect relationship between any two memories. Time in dreams can be determined by the observation that while our waking consciousness is inoperative there is a kind of dream consciousness that is centered in the biological 'now' of our brain regardless of any causal relationship between sequential dream images that are time labeled or not time labeled. The sleeping 'now' processes these dream images and videos sequentially even if we are not aware of time in the dream. The dream can be 'timeless' especially if we are not aware in the dream of time. The T-computer is coupled to the 'unconscious now' of sleep while experiencing the stream of dream states that animate our mind even if we forget the whole dream upon waking. Time in active dreams and recalled memories is usually compared to the clocks of our awake lives. Since time is a creation of our brains biological T-computers and doesn't exist as a dimension as in space-time maps in science, it is no wonder that our awareness of time can be distorted leading us to some confusion with memories that can't be put in order or the nonsensical sequence of images composing dreams where time could give the impression of access to a past that doesn't exist or even time reversal effects that do not occur in the 'real' physical universe of our awake states of consciousness. A brief review of what time is and what time is not is presented to clarify the meaning of time in our memories and dreams.



**INTRODUCTION:** A review of the 7 principles found to be the actual nature of time.

1. **Philosophy of Time:** time exists as information, NOT as a dimension. Time is as real as information is real. The **T-computer of the brain creates time**. Note that my proposed T-computer model [see figure below] has been confirmed with fMRI research. See this paper: ["The evolution of brain activation during temporal processing" by Stephen M. Rao, Andrew R. Mayer, and Deborah L. Harrington from Nature Neuroscience • volume 4 no 3 • march 2001 pp 317-323](#)



2. **Arrows of Time:** all arrows of time only exist as constructions of our brain. These constructed arrows are produced using signal/information flow in **causal networks**. All arrows of time point from **cause** [source] to **effect** [sink] from simple 2-level systems at the quantum scale such as photon emission in atoms up through the cosmological domain through hierarchical scaling of interconnected causal networks at various plateaus of complexity [POCs].

3. **Direction of Time:** defined by us as applied to the vectors we use to make maps from cause to effect nodes in causal networks of matter forming the evolving universe.

4. **There is no Time to travel 'in'**, only space [i.e. the vacuum] where the 'now' created by our consciousness is all we can directly experience. Note that the vacuum exists as a physical entity and space is only a map of this fundamental basis for the universe.

**"The Map is not the territory" - Alfred Korzybski**

5. **Our brains T-computer creates 'time' labeled maps** of the memory patterns of the observed changes in the configurations of matter in the universe into sequential time stamped and labeled memories. ***Change is a Fundamental property of the universe, time is not.***

**"No change, then, no time." - J. B. Priestley**

6. **The Problem of Time** [i.e. what is time etc.] is solved using Feynman Clocks, T-computers, and Causal Networks.

7. **The vacuum is space and time is a measure of changes in and evolution of the complex configurations of matter [like us] floating on the surface of the vacuum sea of energy.** We attribute dimensions to the vacuum [space] as part of our application of geometry [models] to the real world. The vacuum is much more complex than mere 'empty' space. The vacuum is in fact a multi-vacuum with properties that depend locally on matter and globally on cosmic universality. Cosmological evolution is measured by the maps of change we construct using time as a metric.

**CONCLUSIONS:** So where does this leave us when thinking about time with respect to our dreams and memories? The nature of time from an 'objective' empirical physical science perspective does not necessarily include psychological time as applied to the personal experience of mental phenomena since there are intrinsic chaotic elements in the subjective time in our minds that do not lend themselves to rigorous examination. It is still possible to understand time in relation to the internal thought processes that support memories and dreams as part of everyday activities.

Lets look at our memories first. When our brains T-computer time labels an event recorded in our memory we can register it with other memories and identify its location in a causal network built from sets of memories that represent our past in an ordered chronological pattern. We assume that our memories have a certain subjective reality for each of us regardless of their reality for others. Our time labeling of such snapshots of our lives allows us to feel that we have a 'fix' on our past and a history that at least subjectively seems to make sense even if there were no apparent purpose or meaning for these occurrences that our brains decided were important enough to remember. Time in this case can be defined for us as our lifetime experiences that when taken collectively help to elucidate our personality in the 'now' common to all of us.

Next lets look at our sleep state dreams. These dreams are not to be confused with day dreams in which we try to imagine our future but sleep dreams are the movies in our heads when we sleep. Time in sleep dreams mostly is not paid attention to by the 'now' of the dream state. We can access illusory and fantastic hybrids of reality in such a way that time is irrelevant or not part of the flow of unreality that constitutes our escape from the reality of the wakeful mind. Time in this case is something that occurs outside our bodies as we sleep. If you dream of clocks and have feeling of time compelling you to hurry up or slow down then you might find that even these dream clock time maps are existent only in the world of chaotic thoughts and strange fixations an surreal fictions.

If we look at day dreams and time with respect to our imaginings of our futures, we have a *soft* time scale due to the fact that the future doesn't exist yet and awaits our activities and interactions with the universe to make it happen *if possible*. Once again imagination does not necessarily coordinate with rigid physical clock time as used for ordering our daily lives.

**Therefore we must enjoy the flexible nature of time when applied to memories and dreams since time for all of us is limited not only by our imagination but more strongly by the intrinsic finite lifetime of our bodies.**